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OSTI-LLNL-QIP-SIII.0, Rev. 0, Mod. 1; Scientific Notebooks

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SCIENTIFIC NOTEBOOKS

Quality Implementing Procedure ID: OSTI-LLNL-QIP-SIII.0, Rev.0, Mod.1 *Effective:* 5/1/05

1. PURPOSE

This Quality Implementing Procedure (QIP) establishes the process and responsibilities for use of scientific notebooks in scientific investigations. Scientific investigations shall be performed using scientific notebooks, implementing procedures, or a combination of both to document in-process activities, to record decision points, and to document results

2. SCOPE

This procedure applies to all scientific staff (hereafter referred to as Investigator) within the Office of Science & Technology and International (OSTI) – Lawrence Livermore National Laboratory (LLNL) Project who use scientific notebooks for OSTI-LLNL activities subject to the OSTI-LLNL Quality Assurance Plan (QAP) which implements the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM) *Quality Assurance Requirements and Description* (QARD), DOE/RW-0333P. This procedure may also be used for scientific notebooks describing OSTI-LLNL activities not subject to the requirements of the QAP. This QIP has been prepared in accordance with OSTI-LLNL-QIP-5.0, *Preparing the Quality Assurance Plan and Quality/Technical Implementing Procedures.*

This procedure applies to the Technical Reviewer, Quality Assurance (QA) Reviewer, Principal Investigator (PI), Project Manager (PM), and the Deputy PM (DPM). An Investigator may be a scientific staff member, a PI, in which case the DPM provides oversight, or a DPM, in which case the PM provides such oversight.

3. PROCEDURE

3.1 General

3.1.1 Scientific investigations shall be performed using scientific notebooks, implementing procedures, or a combination of both.

3.1.2 A pre-bound notebook with consecutively numbered pages shall be used for all scientific notebooks. A spiral bound notebook is not acceptable.

3.1.3 Loose materials included in the scientific notebook shall be permanently attached (i.e., glue or clear tape used in such a manner that it can be detected if the material is removed; use of staples is not allowed). Materials included in scientific notebooks shall not overlap other information/material.

3.1.4 At notebook closure, a line shall be drawn through all excess blank spaces.

3.1.5 Supporting Information

A. All supporting information created while conducting the work that cannot be conveniently included in the scientific notebook (e.g., computer printouts,

calibration records) may be contained in a designated Scientific Notebook Supplement, which may take the form of a loose-leaf binder.

B. Each supplement must display the scientific notebook identifier of the notebook with which the supplement is associated. If floppy disks or CD-ROMs are part of supplements, each disk shall bear the scientific notebook identifier with which the disk is associated.

C. The supporting information should be organized and labeled during the scientific investigation to the degree necessary, as determined by the Investigator. The supplement must indicate what information is contained within the supplement at the time of review. It is recommended that the supplement be paginated, either as a whole or by division.

3.1.6 Entries shall be recorded in the scientific notebook, preferably on the day that the work is performed, in order to prevent any loss of information. Entries not made on the date the work was performed must display the date of the entry as well as the date of work performance and the name of the investigator who performed the work.

3.1.7 Each entry shall be signed (or initialed) and dated by the person making the entry.

3.1.8 Corrections to scientific notebook entries or supporting information shall be made, initialed, and dated by drawing a single dark line through the incorrect or obliterated information and placing the correct information (with explanation, if appropriate) in close proximity or noting another location where the corrected information is documented. Scientific notebook entries, including corrections, shall be legible and reproducible per the requirements of OSTI-LLNL-QIP-17.0, *Records Management.*

3.1.9 The Investigator is responsible for the security of the scientific notebook in accordance with OSTI-LLNL-QIP-17.0 until it is submitted to the Records Center (RC). The PI or Reviewers shall be responsible for the scientific notebook security while in their possession.

3.1.10 A Table of Contents shall be developed and maintained through the course of the investigation on the initial pages set aside for this purpose with entries that list the main topics or activities covered by the notebook and applicable page numbers of each. Prior to closure of the scientific notebook, the table of contents shall be updated to include a listing of supplements or to provide the location of that listing within the scientific notebook.

3.1.11 Time line requirements and due dates identified in this procedure are based on calendar days unless otherwise stated and are associated with administrative management of the scientific notebook process. Failure to meet these dates are managed as identified herein and are not considered a violation of the OSTI-LLNL QA Program.

3.2 Identification and Control of Scientific Notebooks

3.2.1 PI/DPM/PM:

A. Review the Technical Work Plan (TWP) prepared in accordance with OSTI-LLNL-QIP-2.2, *Planning for Science Activities*. Ensure the scope and schedule for the proposed work are consistent with this planning document.

B. Direct the Investigator under his/her supervision to open a scientific notebook to document the planned activities.

C. For multiple related tasks, or task breakdown assignments, a "Master" notebook may be used by the PI that controls any series of supporting notebooks, each of which will be registered as in Sections 3.2.2 A, B, and C, and as such, are unique as a series of volumes.

3.2.2 Investigator:

A. Obtain a scientific notebook identifier from the Scientific Notebook Coordinator.

B. The scientific notebook title used should be sufficiently descriptive to enable subsequent search and retrieval of the notebook by title.

C. Place the scientific notebook identifier on the cover or first page of the scientific notebook. The first page must also include the scientific notebook title, QA designator, and dated initials or signature of the Investigator and all authorized users.

3.3 Scientific Notebook Initial Entry

3.3.1 Investigator:

A. Record an Initial Entry in the scientific notebook. Information provided shall be sufficient to assess compliance to this procedure. Approved planning documents shall be referenced. The following information shall be addressed:

1. Statement of objective and description of work to be performed.

2. List of sample types that are expected to be involved in the work activity.

3. List of measuring and test equipment (M&TE) planned to be used. Describe the calibration information required by OSTI-LLNL-QIP-12.0, *Control of Measuring and Test Equipment and Calibration Standards*. Indicate the calibration schedule or frequency, if established.

4. Description of the procurement activity pertinent to the investigation such as calibration or analytical services.

5. Identification of software to be used, including name, version number, qualification status, Software Tracking Number, and operating platform.

6. Special training/qualification requirements, prerequisite actions, environmental conditions needed, and potential sources of error, as applicable.

7. Provisions for controls of any electronically managed information, as applicable, in accordance with OSTI-LLNL-QIP-SV.0, *Management of OSTI-LLNL Electronic Data.*

8. List of individuals expected to make entries in the scientific notebook including printed names, signatures, and initials.

B. Additions to the Initial Entry can be made at any time during an investigation and inserted in the scientific notebook on the next available page. Include a cross-reference to the amended initial entry in the Initial Entry. Document any amendment to the Initial Entry in the Table of Contents.

C. Initiate a Compliance Review when the Initial Entry (see Subsection 3.5.2) is completed.

D. The work to be performed shall commence only after the successful completion of the Initial Entry Compliance Review, including resolution of comments.

3.4 Scientific Notebook In-Process Entries

3.4.1 Investigator:

A. Document entries in the scientific notebook in compliance with the general instructions in Section 3.1. When used in conjunction with the referenced approved plans/procedures, document the following in sufficient detail to allow a Technical Reviewer to retrace the investigation and confirm the results or repeat the investigation and achieve comparable results without recourse to the original Investigator:

1. Step-by-step description of the work as it was performed, including any prerequisite actions, and results obtained. Document decisions made and the basis of each, especially if based on interim results.

2. Names of individuals performing the work.

3. Description of changes made to methods used, as appropriate.

4. Changes or additions to the Initial Entry.

5. Any conditions that may adversely affect the research.

6. Identification of any:

   - Samples by name and identification number.

   - Test equipment by name, unique identifier, calibration date, calibration due date, and linkage to data and/or samples taken. M&TE calibration shall be documented in accordance with OSTI-LLNL-QIP-12.0.

   - Computer software required information not previously provided. Software may be used prior to qualification to develop preliminary input.

7. Identification of any preliminary data that were used in the investigation. Obtain any preliminary, under development information or data to be used in the study (other than data generated by the study itself) from the PI developing and/or providing the input. Ensure that, if this input is used in a Technical Work Product (i.e., Technical or Model Report), the Responsible PI shall submit the data to the Technical Data Management System (TDMS) in accordance with OSTI-LLNL-QIP-SIII.3Q, *Submittal and Incorporation of Data to the Technical Data Management System*, or the Technical Information Center (TIC).

8. Identification of any "rejected" and/or non quality-affecting data, if known.

9. Submit key technical data, produced by the investigation documented in the scientific notebook, to the Technical Data Coordinator for submittal to the TDMS in accordance with OSTI-LLNL-QIP-SIII.3Q. Key technical data refer to a subset of all data obtained throughout the OSTI-LLNL scientific investigation that may be used to characterize and license a high-level nuclear waste geologic repository (i.e., data used as input to the Technical or Model Reports, data that replace or supersede data currently in the TDMS, etc.)

10. Reference any scientific notebook supplements created.

B. Create a new notebook volume when the notebook becomes nearly full.

   1. Copy or refer to Initial Entry that was in effect at completion of a volume and use as a beginning to a new volume.

   2. Refer to the new continuing notebook volume with a note at the end of the full notebook volume to show it is being continued and identify the volume (i.e., notebook identifier) in which it is being continued.

3. In the newly issued scientific notebook volume, reference the preceding volume, as appropriate.

3.5 Scientific Notebook Review

3.5.1 Investigator:

Notify the PI (or PM/DPM if Investigator is the PI) when Sections 3.5.2 A, B, C, or D below apply.

3.5.2 PM/DPM:

Contact the Scientific Notebook Coordinator for initiation of a Compliance Review and/or a Technical Review when:

A. The scientific notebook original Initial Entry has been completed or amended to reflect change in Scope (Compliance Review).

B. The scientific notebook is closed out (Section 3.6.1, A) (both Technical and Compliance Review).

C. The period since notebook origination, or the previous review, is approaching one year (both Technical and Compliance Review). The Scientific Notebook Coordinator shall report the status of reviews not completed within 30 days of the annual due date monthly to the DPM/PM and QA Manager until completed (i.e., comments resolved and review accepted by Technical or QA Review).

D. An Investigator leaves the work activity and the scientific notebook is transferred to another PI (Technical Review).

3.5.3 DPM/PM:

Select a Technical and/or QA Reviewer as follows:

A. The Technical Reviewer shall be technically qualified (i.e., a peer of the Originator) in the scientific subject area(s), or be similarly qualified in a user research subject area. The reviewer shall be independent of the work produced.

B. The QA Reviewer shall be an individual assigned to perform a Compliance Review who is familiar with the overall OSTI-LLNL QA Program and can determine adequacy of notebook compliance.

3.5.4 Technical Reviewer:

A. Perform a documented Technical Review of the scientific notebook or scientific notebook segment for technical adequacy, correctness,

completeness, accuracy, and applicability to the issues being addressed. Additionally, the following criteria shall be used:

1. The investigation is described in sufficient detail to retrace the investigation and confirm the results, or to repeat the investigation and achieve comparable results, without recourse to the original Investigator.

2. Software used is clearly identified and suitable to the problem being solved. Software may be used prior to qualification to develop preliminary input. However, software used to support a Technical Work Product (i.e., Technical Report, Model Report, qualified data etc.) shall be qualified, controlled, and documented in accordance with OSTI-LLNL-QIP-SI.0, *Software Management.*

3. The documentation for any electronically managed information is in accordance with the OSTI-LLNL-QIP-SV.0, *Management of OSTI-LLNL Electronic Data.*

B. Document the scientific notebook review on the Review Record, Applicable Reference Information (indicating the beginning and end points of the review), and Comment Sheet in accordance with OSTI-LLNL-QIP-6.1, *Document Review.*

3.5.5 Investigator:

Resolve any comments provided by the Technical Reviewer.

3.5.6 Technical Reviewer:

Complete comment resolution in accordance with OSTI-LLNL-QIP-6.1. Return the review documentation to the Investigator.

3.5.7 QA Reviewer:

A. Perform a Compliance Review (if required by Section 3.5.2) and document the Compliance Review by completing the Scientific Notebook Compliance Review Worksheet (Attachment 1).

A. Upon satisfactory completion of comment resolution, sign and date the Worksheet, indicating final acceptance of all responses. Return the Worksheet and associated documentation to the PI, deputy PM, or PM, as applicable.

3.5.8 PI/DPM, or PM (as appropriate):

A. Indicate acceptance of the Compliance Review by signing and dating the "Review Acceptance" line in the header of the Worksheet.

B. Return the Worksheet and associated documentation to the Investigator.

3.5.9 Investigator:

A. Include the Review Records, Compliance Review Worksheet and any associated documentation as an entry in the scientific notebook as close to the end of the segment reviewed as possible or in the Supplement with cross reference to the notebook thereof. Update the Table of Contents accordingly.

B. Return the notebook and supplement to the Scientific Notebook Coordinator for tracking and overseeing that records are submitted to the RC per Section 4.

3.6 Closure of Scientific Notebooks

3.6.1 Investigator:

A. Close out the scientific notebook when any of the following apply:

1. The activity documented in the scientific notebook is completed and the scientific notebook is no longer needed (e.g., no technical entries have been made between consecutive Compliance Reviews), or at the discretion of the PI.

2. It is determined that the entries in the scientific notebook are no longer of technical value, such as when work is cancelled and the research being documented is discontinued.

3. A scientific notebook is full and a new volume is opened to continue the investigation.

B. Sign and date a concluding entry in the notebook citing the end of the notebook activity or phase of the activity. The concluding entry should summarize the results of the investigation. If no data have been collected or developed as part of the notebook activities, indicate in the concluding entry that the notebook does not contain technical data generated through this notebook investigation.

C. Finalize the Table of Contents to include a listing of supplements or to provide the location of that listing within the scientific notebook.

D. Request a Technical Review to be performed (see Section 3.5).

E. Upon completion of the Technical Review:

1. Enter a statement at the end of the notebook indicating readiness for closure of the entire scientific notebook.

2. Forward the notebook to the PI/ DPM/PM as appropriate.

3.6.2 PI/DPM/PM:

Sign and date in the scientific notebook an approval for segment completion or closure of the notebook and forward the notebook, including all supplements referenced in the notebook, to the Scientific Notebook Coordinator for overseeing the initiation of a Compliance Review (see Section 3.5).

3.6.3 QA Reviewer:

Upon completion of the Compliance Review, return the notebook and the completed Worksheet to the Investigator.

3.6.4 Investigator:

Include the Worksheet in the notebook or supplement with cross-reference thereof, update the Table of Contents, and return the notebook and supplement(s) to the Scientific Notebook Coordinator.

3.6.5 Scientific Notebook Coordinator:

Ensure that all required records have been collected and all required actions have been completed in accordance with this procedure. Submit the records to the Records Coordinator in accordance with Section 4.

4. RECORDS

The records listed in Sections 4.1 and 4.2 shall be collected and submitted to the Records Coordinator in accordance with OSTI-LLNL-QIP-17.0 as individual records or included in a records package, as specified. The original hardbound copy of the scientific notebook may be retained by the Investigator (or designee).

4.1 QA Records

For any submittal of a scientific notebook, the record must contain a copy of the page where the scientific notebook identifier and QA designator are displayed. Include the following records in the appropriate type of records package:

Segments of scientific notebook:

Records Package Table of Contents, identifying transmittal as a segment

Segment of scientific notebook with interim contributions, including completed Technical and Compliance Reviews of the segment.

Supplements applicable to segment

Final scientific notebook:

Records Package Table of Contents, identifying transmittal as that of a final, closed notebook. Supplement the previous segment, if any.

Segment, including completed Technical and Compliance Reviews of the segment, or entire scientific notebook (if segment reviews not conducted) including completed Technical and Compliance Reviews. For completeness, the entire notebook may be submitted at this time.

Supplements applicable to final scientific notebook.

4.2 Non-QA Long-Term Retention Records

For any submittal of a scientific notebook describing non-QA tasks, the record must contain a copy of the page where the scientific notebook identifier and QA designator are displayed. Include the following records in the appropriate type of records package:

Segments of scientific notebook:

Records Package Table of Contents, identifying transmittal as a segment

Segment of scientific notebook with interim contributions, including completed Technical and Compliance Reviews of the segment.

Supplements applicable to segment

Final scientific notebook:

Records Package Table of Contents, identifying transmittal as that of a final, closed notebook. Supplement the previous segment, if any.

Segment, including completed Technical and Compliance Reviews of the segment, or entire scientific notebook (if segment reviews not conducted) including completed Technical and Compliance Reviews. For completeness, the entire notebook may be submitted at this time.

Supplements applicable to final scientific notebook.

4.3 Non-QA Short-Term Records (Three years or less retention)

None.

5. RESPONSIBILITIES

5.1 The **Project Manager (PM)** is responsible for the overall technical and QA adequacy of the of the scientific notebook process.

5.2 The **Deputy PM (DPM)** is responsible for assignment of Technical and QA Reviewers of scientific notebooks and providing oversight functions of the PI when the Investigator is a PI.

5.3 The **Principal Investigator (PI)** is responsible for the technical adequacy of the scientific work done by the Investigator; for authorizing the initiation of the Scientific Notebook and ensuring consistency with the TWP.

5.4 The **Investigator** is responsible for performing the scientific investigation and for maintaining the notebook in accordance with this procedure.

5.5 The **Technical and QA Reviewer** are responsible for performing Technical and Compliance reviews, respectively, as assigned by the PM/DPM.

5.6 The **Scientific Notebook Coordinator** is responsible for assigning Scientific Notebook numbers, working with the Investigators in the development of initial entries, coordinating Technical and QA reviews thereof, and keeping management informed on the status of notebook activities.

6. ACRONYMS AND DEFINITIONS

6.1 Acronyms

LLNL	Lawrence Livermore National Laboratory
M&TE	Measuring and Test Equipment
OCRWM	Office of Civilian Radioactive Waste Management
OSTI	Office of Science & Technology and International
PI	Principal Investigator
PM	Project Manager
QA	Quality Assurance
RC	Records Center
TDMS	Technical Data Management System
TIC	Technical Information Center

6.2 Definitions

Compliance Review: A review of a scientific notebook to verify compliance with this procedure.

Record: All books, papers, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of data in them (Public Printing and Documents, 44 U.S.C. 3301). Records may be originals or copies.

Records Package: A collection of records supporting one topic or subject. Examples are all of the records (1) supporting a QA audit, (2) supporting a single procurement, (3) created in the development of a Technical or Model Report, or (4) supporting a scientific study.

Scientific Notebook: A record of the methodology and results of scientific investigations that is used when the work involves a high degree of professional judgment or trial and error methods or both (QARD).

Scientific Notebook Entry: Information recorded in a scientific notebook describing activities related to scientific investigations as they took place.

Scientific Notebook Segment: A record of less than a complete scientific notebook sent to the RC. A scientific notebook segment is considered to be a partial records package.

Scientific Notebook Supplement: A record, or collection of records, created while conducting the work covered by a scientific notebook, that cannot be conveniently included in the scientific notebook, such as computer listings, floppy disks, magnetic tapes, large volume supplementary materials, or large plots. A supplement may be in the form of a loose-leaf binder that is referenced in the scientific notebook. A Scientific Notebook Supplement might also include a Logbook whose sole function is to tabulate repetitive information that supports an investigation documented in a scientific notebook. Examples of logbook information may include a tabulation of sample numbers or of analytical instrument runs in a laboratory or a list of the dates of equipment calibrations and their relevant calibration report numbers.

7. REFERENCES

Quality Assurance Requirements and Description, DOE/RW-0333P

Public Printing and Documents, 44 U.S.C. 3301

OSTI-LLNL-QIP-2.2	*Planning for Science Activities*
OSTI-LLNL-QIP-5.0	*Preparing the Quality Assurance Plan and Quality/Technical Implementing Procedures.*
OSTI-LLNL-QIP-12.0	*Control of Measuring and Test Equipment and Calibration Standards*
OSTI-LLNL-QIP-17.0	*Records Management*
OSTI-LLNL-QIP-SI.0	*Software Management*
OSTI-LLNL-QIP-SIII.3	*Submittal and Incorporation of Data to the Technical Data Management System*
OSTI-LLNL-SV.0	*Management of OCRWM-LLNL Electronic Data*

8. ATTACHMENTS

Attachment 1 - Scientific Notebook Compliance Review Worksheet

9. REVISION HISTORY

2/25/05 Revision 0, Modification 0

Initial Issue.

5/1/05 Revision 0, Modification 1

Added new Subsections 3.3.1 C & D and 3.5.2 A, modified Subsection 3.5.1, and modified Attachment 1 to provide for the performance of an Initial Entry Compliance Review. Modified Attachment 1 to: 1) delete part 2 of the worksheet for the performance of an Annual Review, and 2) changed "Annual" Review to "Interim/Annual" Review. Page 12, changed RPC to RC.

10. APPROVALS

L G Gouveia — 4/25/05

Preparer: Leigh A. Gouveia — Date:

Qinhong Hu — 4/26/05

Technical Reviewer: Qinhong Hu — Date:

Victor J Barish — 4/26/05

QA Reviewer: Victor J. Barish, Jr. — Date:

David B. McCallen — 5/1/05

Project Manager: David B. McCallen — Date:

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SCIENTIFIC NOTEBOOK
COMPLIANCE REVIEW WORKSHEET

QA: QA
Page: 1of: 3

Scientific Notebook Identifier:	Investigator:
Scientific Notebook Title:	
Reviewed By: Print Name:	Signature: Date:
Review Comment Resolution Satisfactory: Print Name:	Signature: Date:
Review Acceptance *(to be signed by PI, Deputy PM or PM, as appropriate, after the Compliance Review is* Print Name:	Signature: Date:

Type of Compliance Review: Scientific Notebook page range reviewed: _____ to _____

1. Initial Entry Review: ☐ *Complete Parts 1 and 2*
2. Interim/Annual Review: ☐ *Complete Parts 1 and 3*
3. Closure Review: ☐ *Complete Parts 1, 3, and 4*

Additional Implementing Documents Identification *(e.g., Technical Work Plans [TWPs])*:

Instructions for Completing This Form:

1.	If any part of a compound question in the Requirements/Criteria column cannot be answered **YES**, then mark the entire requirement, **NO**, and provide an explanation in the **COMMENTS** column.
2.	Marking the **N/A** box means the criteria are not applicable to this notebook. If the N/A box is checked, provide a brief justification in the **COMMENTS** column.
3.	All criteria marked **NO** require an explanation in the **COMMENTS** column and will be considered a non-compliance issue that the investigator must address in comment response.
4.	The Review Acceptance box above will be completed by the PI, Deputy PM or the PM, as appropriate, only after the Reviewer has signed above for satisfactory Comment Resolution.

	Requirements/Criteria and Relevant Paragraph [OSTI-LLNL-SIII.0, Section No.]	CRITERIA MET Yes	No	N/A	Comments
PART 1: GENERAL/IDENTIFICATION AND CONTROL OF SCIENTIFIC NOTEBOOKS					
1.	Is a pre-bound notebook used? (spiral bound not acceptable) [3.1.2]				
2.	Does SN contain consecutive pagination? [3.1.2]				
3.	Is loose material permanently attached? (Overlapping material/staples not allowed) [3.1.3]				
4.	Are excessive blank spaces lined through? [3.1.4]				
5.	Are SN supplements properly cross-referenced with SN identifier for which it is associated? Are supplements organized and labeled such that contents are clear? (pagination recommended) [3.1.5]				
6.	Have all entries been initialed or signed, and dated? (Entries not made on date work performed must display date of entry/date of work.) [3.1.6, 3.1.7]				
7.	Are corrections lined through, initialed, dated, and explained, if appropriate? Is SN sufficiently legible? [3.1.8]				
8.	Is Table of Contents adequately listing main topics and applicable pages? [3.1.10]				
9.	Is there a unique Scientific Notebook ID number located on the first page or cover? [3.2.2 C] Has the title, QA designator, initials/signature of investigator, date been entered? (A Master SN may be used that controls any series of supporting SNs, each of which are unique as a series of volumes.) [3.2.1 C]				

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QA: QA
Page: 2 of: 3

Scientific Notebook Identifier:

Requirements/Criteria and Relevant Paragraph [OSTI-LLNL-SIII.0, Section No.]	CRITERIA MET			Comments
	Yes	No	N/A	
PART 2: SCIENTIFIC NOTEBOOK INITIAL ENTRY				
10. Is there a statement of objective and description of work? Are approved planning documents referenced? [3.3.1, A,1]				
11. Is the scope/schedule for the proposed work in the SN consistent with the governing TWP, if applicable? [3.3.1, A]				
12. Is there a list of sample types involved in the work activity? [3.3.1, A, 2]				
13. Is there a list of measuring and test equipment (M&TE) equipment type(s) (manufacturer and model #) to be used? [3.3.1, A, 3]				
14. List of M&TE needing calibration and the calibration details/methods? (Include schedule, frequency if established) [3.3.1 A, 3]				
15. List of needed Q-procurement types (e.g., calibration or analytical services)? [3.3.1, A, 4]				
16. Has all software to be used been identified including identification of software name/version, qualification status, STN, and operating platform)? [3.3.1, A, 5]				
17. Has special training and/or qualification requirements, prerequisite actions, special or unique environmental conditions needed, and potential sources of error been identified? [3.3.1, A, 6]				
18. Are there provisions for controls of any electronically managed information? [3.3.1, A, 7]				
19. Is there a list of personnel contributing to the notebook with their printed names, signatures and initials? [3.3.1, A, 8]				
20. Is the initial entry signed and dated? [3.1.7]				
Comments:				
PART 3: SCIENTIFIC NOTEBOOK IN-PROCESS ENTRIES/SUBMITTAL AND TRACEABILITY OF DATA				
21. Description of the step-by-step work performed? [3.4.1, A, 1]				
22. Have investigation results been given? Are decisions documented, and the basis for each decision provided (especially if interim results)? 3.4.1 A, 1]				

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Scientific Notebook Identifier:

Requirements/Criteria and Relevant Paragraph [OSTI-LLNL-SIII.0, Section No.]	CRITERIA MET			Comments
	Yes	No	N/A	
23. Are any amendments to initial-entry adequate? Are additions to initial entries cross-referenced in the initial entry; are initial entry amendments documented in the TOC? [3.4.1, A, 4; 3.4.1, B,1]				
24. Conditions described that might adversely affect the research? [3.4.1, A, 5]				
25. Are samples that will be used properly identified? [3.4.1, A, 6]				
26. Is test equipment properly identified? [3.4.1, A, 6]				
27. M&TE calibration adequately documented? [3.4.1, A, 6]				
28. Is listed computer information given? [3.4.1, A, 6] hardware, software/version, operating system, operating platform)				
29. For new volumes, is original or updated initial-entry copied into or referenced at the beginning of the volume? [3.4.1 B, 2]				
30. Adequate controls followed for electronically managed data? [3.3.1, A, 7]				
31. Were data used in Q-products obtained from the TDMS or Technical Information Center? [3.4.1, A, 7]				
32. Data submitted to TDMS in accordance with OS&TI-LLNL-SIII.3Q? [3.4.1, A, 9]				
PART 4: CLOSURE OF SCIENTIFIC NOTEBOOKS				
33. Has statement of conclusion been entered? [3.6.1, B]				
34. Is there a non-collection of data statement, if appropriate? [3.6.1, B]				
35. Technical review completed? [3.6.1, D]				
36. Are all supplements listed in the TOC or does TOC provide a cross-reference to location thereof? Have all supplements referenced in the notebook been provided for the closure compliance review? [3.1.10; 3.6.1, C]				
Comments:				